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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
GOLDBERG, JEANINE ANNE	

ART UNIT	PAPER NUMBER
1634	13

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/819,667	Applicant(s) YANO ET AL.	
	Examiner Jeanine A Goldberg	Art Unit 1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *August 20, 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) *19-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is in response to the papers filed August 20, 2002. Currently, claims 1-25 are pending. Claims 19-25 have been withdrawn from consideration as drawn to non-elected claims

2. All arguments have been thoroughly reviewed but are deemed non-persuasive for the reasons which follow. This action is made FINAL.

3. Any objections and rejections not reiterated below are hereby withdrawn in view of applicant's remarks and amendments to the claims.

4. This action contains new grounds of rejection necessitated by amendment.

Maintained Rejections

Priority

1. This application claims priority to a foreign filed document published in Japanese, filed March 30, 2000.

Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a translation of the foreign application should be submitted under 37 CFR 1.55 in reply to this action.

Election/Restrictions

2. Applicant's election without traverse of Group I in Paper No. 12, filed August 20, 2002 is acknowledged. Applicant's have requested that upon indication of allowability

of Group I, drawn to products, that Group II be rejoined with appropriate opportunity being provided for any amendment to Group II as required.

Claim Objections

3. Claims 2-6 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 2 fails to further limit Claim 1 because the claims allow for nucleic acid fragments which comprise the nucleic acid of Claim 1. Therefore, Claim 2-6 are broader than Claim 1. Claim 1 is limited to SEQ ID NO: 1-9, in some embodiments and Claim 2 allows for any nucleic acid which comprises SEQ ID NO: 1-9.

Claim Rejections - 35 USC § 112- Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

B) Claim 2-18 is indefinite over the recitation "comprising the nucleic acid fragment according to Claim 1, or a nucleic acid fragment comprising a partial sequence in a base sequence thereof". The claim appears to be broadening the scope of the

invention since the claim allows for nucleic acids comprising the fragment of SEQ ID NO: 1-9 or a modified sequence which was not claimed in Claim 1.

Response to Arguments

The response traverses the rejection. The response asserts that the amendments have overcome the rejection. This argument has been reviewed but is not convincing because the claims have been amended to require that the nucleic acid consists of SEQ ID NO: 1-9 in claim 1, however permit the nucleic acid to comprise SEQ ID NO: 1-9 in Claim 2. Therefore, Claim 2 is broader than Claim 1. Thus for the reasons above and those already of record, the rejection is maintained.

New Grounds of Rejection Necessitated by Amendment

A1) Claim 5 is indefinite over the recitation "as an additional modification, a marker is attached to said nucleic acid fragment and/or a moiety attached to a solid-phase carrier is bound to said nucleic acid fragment." It is unclear whether a marker is attached to the fragment and a moiety is attached to a solid-phase carrier; or a marker and a moiety are attached to the fragment; or a either a marker or a moiety are attached to the fragment. As written the claims are unclear what phrases are modifying which phrases. Clarification is requested.

B1) Claims 7, 9 are indefinite because it remains unclear what is being claimed. The claims are directed to two different nucleic acid fragments with a substantial different in their base sequences, wherein at least one of said two different nucleic acid fragments is a nucleic acid fragment for a primer and a marker and/or a moiety attached." It is unclear whether the claim requires that one of the fragments is a primer

of claim 5 which comprises a marker and/or a moiety. However, claim 5 already requires a marker/moiety. Moreover, it is unclear whether both fragments are attached to a solid phase carrier, then it does not seem like the claim is directed to a single primer, as provided in the preamble. Clarification is requested.

C1) Claim 10 is indefinite because it is unclear whether Claim 10 is intended to further limit Claim 5. Claim 5 differs from Claim 10 in that a modification is required, however, the apparent modification of a marker or a moiety has already been required by Claim 5. Therefore, the metes and bounds of the claimed invention are unclear.

D1) Claims 10-13 are indefinite over the recitation "solid-phase carrier wherein said marker or moiety is additionally bound to a 5'- terminal side" because it is unclear what "into a 5' –terminal side" is intended to mean.

Response to Arguments

The response traverses the rejection. The response asserts that it is well known in the art that the 5' terminal side is the left side and the 3' terminal side is the right side. This argument has been reviewed but is not convincing because the claim requires "a 5'-terminal side". It is unclear whether there are more than one terminal side since the claim refers to "a"; whether the terminal side is any position which is "to the left of the center" or whether the 5' terminal side is intended to mean the most 5' terminus. Thus for the reasons above and those already of record, the rejection is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Engel et al (US Pat. 6,287,779, Sept 11, 2001).

Engel teaches primer sequences for various organisms (Table 2).

Engel teaches a nucleic acid fragment from SEQ ID NO: 1-9 which is modified subjected to a mutation based upon the sequence. Specifically Engel teaches a nucleic acid (SEQ ID NO: 18) in which the first nucleotides TTTGCC and the terminating nucleotides cactgtgaaca have been modified or deleted, thereby leaving a fragment of SEQ ID NO: 1, namely aaaac.

With respect to Claim 2, Engel, as explained above teaches a fragment comprising a partial sequence of SEQ ID NO: 1, namely aaaac.

With respect to Claim 3 and 4, Engel teaches a nucleic acid fragment of SEQ ID NO: 1, for example, which deletes and then modifies the deleted regions to obtain SEQ ID NO: 18 provided in Table 2.

With respect to Claims 5-6, 8, 10-11, 13 Engel teaches the primers may be detectably labeled (col 6, lines 24-25). Moreover, Engel also teaches aaaac, a fragment of SEQ ID NO: 1 of the instant application attached to 6 nucleotides on the 5' end which may be a marker for capture on a solid support.

With respect to Claims 7, 9, 12, SEQ ID NO: 18 of Engel contains at least two kinds of nucleic acid fragments with substantial difference in base sequence. For example, Engle teaches a primer, SEQ ID NO: 18, with a fragment of three "T's" attached to a fragment of "G" attached to a fragment of 2 "C's" attached to a fragment of 4 "A's"....etc.

Response to Arguments

The response traverses the rejection. The response asserts that the cited prior art discloses base sequences which are "quite different from the base sequences of SEQ ID NO: 1-9 of Claim 1" (page 9, response filed August 20, 2002). This argument has been reviewed but is not convincing because the claims are not limited to base sequences consisting of SEQ ID NO: 1-9. Claim 1, in part, is directed to a mutation of SEQ ID NO: 1-9, which is a modified base sequence capable of hybridizing at 55C with SEQ ID NO: 1-9. Moreover, the claims are directed to primers comprising the nucleic acid according to Claim 1 or a nucleic acid fragment comprising a partial sequence in a base sequence of the nucleic acid of Claim 1 (limitations of Claim 2). Thus for the reasons above and those already of record, the rejection is maintained.

6. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Brennan (US Pat. 5,474,796, December 12, 1995).

Brennan teaches an array containing oligonucleotides having 10 nucleotides each (10-mers). The array represents every possible permutation of the 10-mer oligonucleotide (col 9, lines 55-60).

Brennan teaches the elements of Claim 1 directed to a nucleic acid fragment from SEQ ID NO: 1-9. Since Brennan teaches every 10-mer nucleic acid, each fragment from SEQ ID NO: 1-9 of 10 nucleotides in length is anticipated. Moreover, for example, Brennan teaches a nucleic acid of gcctckgaaa, a fragment from SEQ ID NO: 1. With respect to Claim 2, Brennan, as explained above teaches a nucleic acid fragment comprising a fragment of each of SEQ ID NO: 1-9. Moreover, Brennan teaches nucleic acids which are modifications of SEQ ID NO: 1-9 such that part of the sequences were deleted, or substituted. Moreover, the nucleic acids contain nucleotides which are capable of being detected and binding to a solid support at the 5' terminal.

Response to Arguments

The response traverses the rejection. The response asserts that the cited prior art discloses base sequences which are "quite different from the base sequences of SEQ ID NO: 1-9 of Claim 1" (page 9, response filed August 20, 2002). This argument has been reviewed but is not convincing because the claims are not limited to base sequences consisting of SEQ ID NO: 1-9. Claim 1, in part, is directed to a mutation of SEQ ID NO: 1-9, namely gcctckgaaa, wherein the rest of SEQ ID NO: 1 has been deleted. This sequence would have the first 10 nucleotides of the 23 nucleotides of SEQ ID NO: 1. Therefore, there would be hybridization between these two molecules. The claims are directed to primers comprising the nucleic acid according to Claim 1 or a nucleic acid fragment comprising a partial sequence in a base sequence of the nucleic

acid of Claim 1 (limitations of Claim 2). Thus for the reasons above and those already of record, the rejection is maintained.

7. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Huisman et al. (J. of Biol. Chem. Vol 266, pages 2191-2198, 1991).

To the extent that the Claims read on a nucleic acid comprising SEQ ID NO: 1-9, the following rejection would be appropriate. The claims do not require any specific length limitation, therefore, the entire PHA gene could be used as a probe for detection of the gene itself. Each of Claims 2-14 specifically allow for additional sequences on the ends of SEQ ID NO: 1-9.

Huisman et al. (herein referred to as Husiman) teaches the nucleotide sequence of the gene which encodes PHA biosynthetic enzymes from *P. oleovorans* (see Figure 2, pages 2194). SEQ ID NO: 1-9 are each embedded within the nucleotide sequence depicted in Figure 2. SEQ ID NO: 1, nucleotides 590-612 of Figure 2; SEQ ID NO: 2, nucleotides 936-958 of Figure 2; SEQ ID NO: 3, nucleotides 1265-1288 of Figure 2; SEQ ID NO: 4, nucleotides 1490-1516 of Figure 2; SEQ ID NO: 5, nucleotides 2089-2113 of Figure 2; SEQ ID NO: 6, nucleotides 3548-3572 of Figure 2; SEQ ID NO: 7, nucleotides 3787-4012 of Figure 2; SEQ ID NO: 8, nucleotides 4507-4530 of Figure 2; and SEQ ID NO: 9, nucleotides 1977-2001 of Figure 2. Therefore, Huisman teaches every limitation of the claimed invention.

Response to Arguments

The response traverses the rejection. The response asserts that the cited prior art discloses base sequences which are "quite different from the base sequences of SEQ ID NO: 1-9 of Claim 1" (page 9, response filed August 20, 2002). This argument has been reviewed but is not convincing because the claims are not limited to base sequences consisting of SEQ ID NO: 1-9. The claims are directed to primers comprising the nucleic acid according to Claim 1 or a nucleic acid fragment comprising a partial sequence in a base sequence of the nucleic acid of Claim 1 (limitations of Claim 2). Thus for the reasons above and those already of record, the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huisman et al. (J. of Biol. Chem. Vol 266, pages 2191-2198, 1991) in view of Solainman et al. (Appl. Microbiol. Biotechnol. Vol 53, pages 690-694, June 2000) and Dieffenbach et al. (PCR Methods and Applications, Vol 3, No. 3, pages S30-37, 1993).

To the extent that the Claims read on a nucleic acid consisting of SEQ ID NO: 1-9, the following rejection would be appropriate.

Huisman et al. (herein referred to as Husiman) teaches the nucleotide sequence of the gene which encodes PHA biosynthetic enzymes from *P. oleovorans* (see Figure 2, pages 2194). SEQ ID NO: 1-9 are each embedded within the nucleotide sequence depicted in Figure 2. SEQ ID NO: 1, nucleotides 590-612 of Figure 2; SEQ ID NO: 2, nucleotides 936-958 of Figure 2; SEQ ID NO: 3, nucleotides 1265-1288 of Figure 2; SEQ ID NO: 4, nucleotides 1490-1516 of Figure 2; SEQ ID NO: 5, nucleotides 2089-2113 of Figure 2; SEQ ID NO: 6, nucleotides 3548-3572 of Figure 2; SEQ ID NO: 7, nucleotides 3787-4012 of Figure 2; SEQ ID NO: 8, nucleotides 4507-4530 of Figure 2; and SEQ ID NO: 9, nucleotides 1977-2001 of Figure 2.

Huisman does not teach nucleic acids consisting of SEQ ID NO: 1-9.

However, Solaiman et al. (herein referred to as Solaiman) specifically teaches using PCR protocol for specific detection of genes coding for polyhydroxyalkanoate (PHA) synthesis using primers. Solaiman teaches that "either purified genomic DNA or

lysate of colony suspension can serve equally well as the target sample for the PCR, thus affording a simple and rapid screening of phaC1/C2-containing microorganisms" (abstract). Solaiman teaches a forward primer, I-179L, which is position 3936-3963 of the nucleotide sequences of Huisman. Solaiman teaches that the primers were based upon two highly conserved sequenced deduced from a multiple alignment analysis of pseudomonad phaC genes (page 691, col 1).

Moreover, Dieffenbach et al. (herein referred to as Dieffenbach) teaches general concepts for PCR primer design. The guidelines are generally directed to size of the oligonucleotide, base pair composition, GC content, and teaches that numerous computer software programs design primers based upon algorithms.

Therefore, it would have been prima facie obvious to one of ordinary skill in the art to have modified the teachings in the art which teach the full length nucleic acid sequence of the phaC gene, Huisman, with the teachings of specific primers from the phaC gene, Solaiman, and the general teaching of how to design appropriate primers, Dieffenbach. In the recent court decision *In Re Deuel* 34 USPQ 2d 1210 (Fed. Cir. 1995), the court determined that the existence of a general method of identifying a specific DNA does not make the specific DNA obvious. Regarding structural or functional homologues, however, the court stated

> "Normally, a *prima facie* case of obviousness is based upon structural similarity, i.e., an established structural relationship between a prior art compound and the claimed compound. Structural relationships may provide the requisite motivation or suggestion to modify known compounds to obtain new compounds. For example, a prior art compound may suggest its homologues because homologues often have similar properties and therefore chemists of ordinary skill would ordinarily contemplate making them to try to obtain compounds with improved properties."

Since the claimed oligonucleotides simply represent functional equivalents of the disclosed primer sequence taught by Solaiman concerning which a biochemist of ordinary skill would attempt to obtain alternate compounds with improved properties, the claimed primers and probes are *prima facie* obvious over the cited reference in the absence of secondary considerations. Given the high level of skill in the art at the time the invention was made, the ordinary artisan would have been motivated to have designed alternative primers based upon the guidance provided by Dieffenbach and the entire gene sequence taught by Huisman. Designing primers was routine in the art and the ordinary artisan would have been motivated to have designed additional primers for amplification and detection of the phaC genes.

Response to Arguments

The response traverses the rejection. The response asserts that the cited prior art discloses base sequences which are "quite different from the base sequences of SEQ ID NO: 1-9 of Claim 1" (page 9, response filed August 20, 2002). This argument has been reviewed but is not convincing because while, the claims are not limited to base sequences consisting of SEQ ID NO: 1-9, the rejection specifically addresses such a narrow claim, as provided in the second paragraph of the rejection. The claims are directed to primers comprising the nucleic acid according to Claim 1 or a nucleic acid fragment comprising a partial sequence in a base sequence of the nucleic acid of Claim 1 (limitations of Claim 2). Thus for the reasons above and those already of record, the rejection is maintained.

10. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huisman et al. (J. of Biol. Chem. Vol 266, pages 2191-2198, 1991) in view of Doi et al (US Pat. 5,968,805, October 1999) .

To the extent that the Claims read on a nucleic acid consisting of SEQ ID NO: 1-9, the following rejection would be appropriate.

Huisman et al. (herein referred to as Husiman) teaches the nucleotide sequence of the gene which encodes PHA biosynthetic enzymes from *P. oleovorans* (see Figure 2, pages 2194). SEQ ID NO: 1-9 are each embedded within the nucleotide sequence depicted in Figure 2. SEQ ID NO: 1, nucleotides 590-612 of Figure 2; SEQ ID NO: 2, nucleotides 936-958 of Figure 2; SEQ ID NO: 3, nucleotides 1265-1288 of Figure 2; SEQ ID NO: 4, nucleotides 1490-1516 of Figure 2; SEQ ID NO: 5, nucleotides 2089-2113 of Figure 2; SEQ ID NO: 6, nucleotides 3548-3572 of Figure 2; SEQ ID NO: 7, nucleotides 3787-4012 of Figure 2; SEQ ID NO: 8, nucleotides 4507-4530 of Figure 2; and SEQ ID NO: 9, nucleotides 1977-2001 of Figure 2.

Huisman does not teach nucleic acids consisting of SEQ ID NO: 1-9.

However, Doi et al. (herein referred to as Doi) teaches using an oligonucleotide consisting of 5' CC(G/C)CAGATCAACAAGTT(C/T)TA(C/G)GAC-3' as a probe for obtaining a DNA fragment. Doi teaches that the oligonucleotide is from a well-conserved region. The oligonucleotide was labeled with digoxigenin using DIG DNA labeling kit (col 5, lines 5-15). The nucleic acid oligonucleotide probe is located at positions 1220-1244 of the nucleic acid of Huisman.

Therefore, it would have been prima facie obvious to one of ordinary skill in the art to have modified the teachings in the art which teach the full length nucleic acid sequence of the phaC gene, Huisman, with the teachings of specific probe from the phaC gene, Doi. In the recent court decision *In Re Deuel* 34 USPQ 2d 1210 (Fed. Cir. 1995), the court determined that the existence of a general method of identifying a specific DNA does not make the specific DNA obvious. Regarding structural or functional homologues, however, the court stated

> "Normally, a *prima facie* case of obviousness is based upon structural similarity, i.e., an established structural relationship between a prior art compound and the claimed compound. Structural relationships may provide the requisite motivation or suggestion to modify known compounds to obtain new compounds. For example, a prior art compound may suggest its homologues because homologues often have similar properties and therefore chemists of ordinary skill would ordinarily contemplate making them to try to obtain compounds with improved properties."

Since the claimed oligonucleotides simply represent functional equivalents of the disclosed probe sequence taught by Doi concerning which a biochemist of ordinary skill would attempt to obtain alternate compounds with improved properties, the claimed primers and probes are *prima facie* obvious over the cited reference in the absence of secondary considerations. Given the high level of skill in the art at the time the invention was made, the ordinary artisan would have been motivated to have designed alternative probes based upon the entire gene sequence taught by Huisman. Designing probes was routine in the art and the ordinary artisan would have been motivated to have designed additional probes/primers for amplification and detection of the phaC genes.

Response to Arguments

The response traverses the rejection. The response asserts that the cited prior art discloses base sequences which are "quite different from the base sequences of SEQ ID NO: 1-9 of Claim 1" (page 9, response filed August 20, 2002). This argument has been reviewed but is not convincing because while, the claims are not limited to base sequences consisting of SEQ ID NO: 1-9, the rejection specifically addresses such a narrow claim, as provided in the second paragraph of the rejection. The claims are directed to primers comprising the nucleic acid according to Claim 1 or a nucleic acid fragment comprising a partial sequence in a base sequence of the nucleic acid of Claim 1 (limitations of Claim 2). Thus for the reasons above and those already of record, the rejection is maintained.

Conclusion

11. No claims allowable over the art.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Jeanine Goldberg whose telephone number is (703) 306-5817. The examiner can normally be reached Monday-Friday from 8:00 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones, can be reached on (703) 308-1152. The fax number for this Group is (703) 305- 3014.

Any inquiry of a general nature should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Jeanine Goldberg
October 23, 2002

W. Gary Jones
Supervisory Patent Examiner
Technology Center 1600